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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,978	12/07/2000	Alan C. Crumb	241/283	2531

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EXAMINER

SHIMIZU, MATSUICHIRO

ART UNIT	PAPER NUMBER
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2635

DATE MAILED: 05/26/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/732,978

Applicant(s)

CRUMB, ALAN C.

Examiner

Matsuichiro Shimizu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

The examiner acknowledges canceled claim 3 and currently amended claim 1.

***Response to Arguments***

Applicant's arguments with respect to claims 1-2 and 4-16 have been considered but are moot in view of the new grounds of rejection.

***Claim Objections***

Claims 1 and 11 are objected to because of the following informalities:

Delete "remove-control" and insert "remote-control (line 11, claim 1; line 15, claim 11). Appropriate correction is required.

Therefore, the rejection of claims 1-2 and 4-16 follows:

***Claim Rejections – 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is objected to under 37 CFR 1.75(c) as being in improper form because the claim depends on canceled claim 3. See MPEP § 608.01(n). Accordingly, claim 4 has been assumed to be dependent on claim 1, and further treated on the merits.

***Claim Rejections – 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatcher (4,404,697) in view of Wang et al. (6,219,380), Patterson et al. (5,651,500) and Herz (6,407,779).

Regarding claims 1, Hatcher discloses a remote-operated control system having a master-control unit (col. 3, lines 23-35, receiver (27) transmitting signal (17) to valves and SPA THERM) and a remote control unit capable of radio transmission (col. 3, lines 23-35, transmitter (28)) there between for use with a pool or spa, comprising: said remote-control unit including a first signal via transmitter (col. 3, lines 23-35, transmitter (28)); and said master-control unit including a second signal via receiver (col. 3, lines 23-35, receiver (27)). But Hatcher does not disclose pulse position modulated transceiver; said master-control transmits operating status to slave - control; and a display that enables a user to ascertain the status of at least one operating parameter of a pool or spa.

However, Wang teaches, in the art of communication system, pulse position modulated transceiver (Wang-col. 1, lines 25-27, RF wireless communication systems; col. 4, lines 6-25, PPM transceiver) for the purpose of providing two-way communication. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include pulse position modulated transceiver in the device of Hatcher as evidenced by Wang because Hatcher suggest transmitter for remote control receiver for master control for one-way communication and Wang teaches pulse position modulated transceiver for the purpose of providing two-way communication.

Likewise, Patterson teaches, in the art of remote control system, said master-control transmit operating status to slave -control for the purpose of providing two-way communication (Patterson-col. 4, lines 21-28, reporting back the status of functions; 50-60, relaying back information from the apparatus to the directing means; col. 6, lines 51-55, the receiving means to "respond" to the operator of hand-held radio transmitter; col. 12, lines 63-67, pump station control). Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include said master-control transmit operating status to slave -control in the device of Hatcher as evidenced by Patterson because Hatcher suggest transmitter for remote control receiver for master control for one-way communication and Patterson teaches said master-control transmit operating status to slave -control for the purpose of providing enhanced control of remote device.

Likewise, Herz discloses, in the art of remote control system, a display that enables a user to ascertain the status of at least one operating parameter of remotely controlled system (col. 13, lines 39-52, display status of remotely controlled equipments) for the purpose of providing controlled status. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a display that enables a user to ascertain the status of at least one operating parameter of remotely controlled equipment in the device of Hatcher as evidenced by Herz because Hatcher in view of Wang and Patterson suggest the light at the bottom central portion of the spa that enables a user to ascertain the status of at least one operating parameter of a pool or spa and Herz teaches a display that enables a user to ascertain the status of at least one operating parameter of an equipment for the purpose of providing controlled status.

Regarding claim 2, Hatcher in view of Wang and Patterson continues, as disclosed in claim 1, to disclose said remote-control unit and said master-control unit communicate bi-directional with pulse position modulated radio signals (Wang-col. 1, lines 25-27, RF wireless communication systems; col. 4, lines 6-25, PPM transceiver (100)), using distributed data processing (Hatcher-col. 3, lines 1-14, receiver (27) distributing data signals via electrical lines 18, 21, 24 and 26).

Regarding claim 5, Hatcher continues, as disclosed in claim 1, to disclose the system, wherein said remote-control unit comprises a keypad that enables a user to send at least one control signal to said master-control unit (col. 5, lines 48-59, controlling the jet action and light via keypad 29-31, 41 and 42 keys on transmitter 28).

All subject matters in claim 9 are disclosed in claims 1-2 and 5, and therefore, rejections of the subject matters expressed in claim 9 are met by references and associated arguments applied to rejections of claims 1-2 and 5.

All subject matters in claim 10 are disclosed in claims 1-2, 5 and 9, and therefore, rejections of the subject matters expressed in claim 10 are met by references and associated arguments applied to rejections of claims 1-2, 5 and 9.

Claim 11 recite a method of operation corresponding to pulse position modulated dual transceiver remote control of claims 1-2. The method claimed is obvious in that it simply follows the logical implementation of pulse position modulated dual transceiver remote control indicated in the claims in performing each of the functional operations of pulse position modulated dual transceiver remote control. Accordingly, the inventive embodiments set forth in claim 11 are met by the cited references and associated arguments as set forth above and incorporated herein.

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Therefore, it is considered that rejection of the limitations expressed in claim 11 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 1-2.

Regarding claim 12, Hatcher continues, as disclosed in claim 11, to disclose the method, wherein said transmitting steps and said sending step are performed when the remote-control unit is situated inside a building (Fig. 1, remote control (28) in side the house; col. 1, lines 23-37, remote location inside the house) and the master-control unit is situated outside of the building (Fig. 1, master control (27) in outside the house; col. 1, lines 23-37, the recirculating operation as well as turn on the spa light associated with control outside the house).

Claims 4, 6-8 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatcher in view of Wang, Patterson and Herz as applied to claims 1 and 11 above, and further in view of Tompkins et al. (5,559,720).

Regarding claim 4 and 16, Hatcher in view of Wang, Patterson and Herz continues, as disclosed in claim 1, to disclose the light at the bottom central portion of the spa. But Hatcher in view of Wang, Patterson and Herz do not teach said display enables the user to determine the temperature of water.

However, Tompkins discloses, in the art of spa control system, said display enables the user to determine the temperature of water in the pool or spa (Tompkins-Fig. 5, col. 16, lines 10-11, control panel 12 may be in spa side; col. 8, lines 25-51, display current reading of spa temperature) for the purpose of providing spa status. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include said display enables the user to determine the temperature of water in the pool or spa in the device of Hatcher in view of Wang,

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Patterson and Herz as evidenced by Tompkins because Hatcher in view of Wang, Patterson and Herz suggest the light at the bottom central portion of the spa and Tompkins teaches said display enables the user to determine the temperature of water in the pool or spa for the purpose of providing enhanced spa status.

Regarding claim 6-8, Hatcher continues, as disclosed in claim 5, to disclose said remote-control unit comprises a keypad that enables a user to send at least one control signal to said master-control unit (col. 5, lines 48-59, controlling the jet action and light via keypad 29-31, 41 and 42 keys on transmitter 28). But Hatcher in view of Wang, Patterson and Herz does not disclose the system of claim 5, wherein the control signal tells said master-control unit to turn a spa heater on or off; to turn spa jets on or off; and to turn a spa light on or off.

However, Tompkins discloses, in the art of spa control system, the system, wherein the control signal (Tompkins-col. 16, lines 10-11, control panel 12 may be in spa side) tells said master-control unit to turn a spa heater on or off (Tompkins-col. 5, lines 50-65, spa heater); to turn spa jets on or off (Tompkins-col. 16, lines 39-61, spa jets); and to turn a spa light on or off (Tompkins-col. 17, line 56 to col. 18, line 5, spa light) for the purpose of remote control of spa. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a display that enables a user to ascertain the status of at least one operating parameter of a pool or spa in the device of Hatcher in view of Wang, Patterson and Herz as evidenced by Tompkins because Hatcher in view of Wang, Patterson and Herz suggest the light at the bottom central portion of the spa that enables a user to ascertain the status of at least one operating parameter of a pool or spa and Tompkins teaches the system of claim 5, wherein the control signal tells said master-control unit to turn a spa heater



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on or off; to turn spa jets on or off; and to turn a spa light on or off for the purpose of remote control of spa.

Claims 13-15 recite a method of operation corresponding to pulse position modulated dual transceiver remote control of claims 6-8 and 11. The method claimed is obvious in that it simply follows the logical implementation of pulse position modulated dual transceiver remote control indicated in the claims in performing each of the functional operations of pulse position modulated dual transceiver remote control. Accordingly, the inventive embodiments set forth in claims 13-15 are met by the cited references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claims 13-15 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 6-8 and 11.

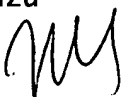
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matsuichiro Shimizu whose telephone number is (703) 306-5841. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik, can be reached on (703-305-4704). The fax phone number for the organization where this application or proceeding is assigned is (703-305-3988).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-8576).

Matsuichiro Shimizu

May 20, 2004



BRIAN ZIMMERMAN  
PRIMARY EXAMINER